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Effect of Art-Based Activities on Psychological Well-Being among Orphaned Children

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Abstract

Orphaned children are potentially vulnerable to psychosocial challenges which arise as a result of the loss of one or both parents. This randomized pre-post experimental study aimed to investigate the effect of a structured art-based intervention on the Psychological Well-being of orphaned children.Eighty orphaned children (7–15 years) from one of the randomly selected Orphanage from Urban Bangalore participated in the baseline assessment of Psychological well-being; the children were administered Psychological Well-Being Scale for Children (PWB-c) at pre-and post -test..The experimental group received structured Art Based activities for six weeks. The intervention group showed a significant improvement in psychological well-being post the intervention than the control group. The finding provides preliminary evidence that structured art-based activities could potentially be a psychosocial approach for supporting psychological well-being among orphaned children.Future research could test the intervention across multiple settings and examine the long-term effects.

Introduction

Orphans are individuals who are abandoned or separated from their biological parents without any information or communication of the parent's return. The death of parents has a great impact on the child's psychological well-being, affecting all the areas of their life such as ability to learn, to be healthy, play, be productive, and relate well to others as they grow. Researchers at Duke University previously used the term 'orphaned and abandoned children but have since switched to 'orphaned and separated children' because the word abandoned had a negative connotation and was not accurate for every child.

Orphanhood leads to various concerns such as prejudice, no proper access to health and educational resources, obstacles to physiologic demands, and many other factors that have impacted their future. Being an orphan in a developing country has a lot of limitations leading to consequences such as painful grieving, reduced cognitive and emotional development, fewer access to education, and a higher risk of being exploited for child labor. Poverty has an impact on all the areas of children's lives and keeps them from having the security and structures required to grow, thrive, and develop. Providing care and resources has become challenging as the potential caregivers in resource-poor countries has reduced due to increased age-adjusted mortality. Orphaned children are in need of environments to grow and develop holistically.

Orphans Growing in Institutional Care:

The effect of alternative care on the physical, cognitive and psychosocial development of children is a matter of great concern. Alternative care for orphaned and vulnerable children can be broadly divided into care in the community and institutional care. Institutional care includes care in orphanages, residential care, and group homes, whereas care in the community comprises kinship care, adoption, and foster care. Though the preference is for community-based care, the choice of any care option for the child should be based on the child's interest, considering his or her needs and circumstances.

International child welfare policies require that institutional care be utilized only when community-based care options are not available or suitable. Policies mandate that children in institutional care should be moved to more appropriate community-based care. Institutional care of children, especially when they are very young, may result in developmental delays. Children growing up in institutions have a higher likelihood of developing psychiatric disorders. Institutionalized children have an increased likelihood of manifesting anti-social behavior. Institutional care for adolescents can be linked to increased risks of psychological problems due to loss of parents and social stigma.

In the case of European studies, children who were institutionalized for the first three years of life had a higher risk of exhibiting attachment problems, delayed developmental milestones, delays in fine motor skills, and abnormalities in the structure of the brain. Institutionalised children are highly likely to develop emotional and behavioral problems in later stages of life. Children growing up in institutional care are highly likely to display aggression and anti-social behaviors. Inadequate institutional care can lead to several mental health problems among institutionalized children and adults. Institutionalized children and adults are highly likely to suffer from psychiatric disorders, such as depression, anxiety, and post-traumatic stress disorder. The adults who were institutionalized as children have a higher risk of having anti-social personality disorder. In addition, children in institutional care are more likely to suffer from illnesses than those in care in the community.(Sahrawat, 2024).

Orphaned children in low- and middle-income countries (LMICs) often have a high unmet need for psychosocial support services. Intervening to address such needs requires an in-depth understanding of the ways in which children and their caregivers perceive and express mental health issues in their culture and how such issues should ideally be measured. This study aimed to assess orphaned children's mental health concerns from the perspectives of the children and their caregivers. The findings were intended to help inform a future randomized controlled trial (RCT) of a trauma-focused cognitive behavioral therapy (TF-CBT) intervention. The study utilized a rapid ethnographic assessment approach, whereby 73 free listing interviews and 34 key informant interviews were conducted by local Kiswahili-speaking interviewers. Both children and caregivers highlighted several culturally common mental health concerns, including lack of inner peace and discrimination. Some of the concerns identified were not explicitly addressed by the intervention or the standardized measurement tools that would be used to evaluate the effectiveness of the intervention. This study makes several recommendations for future interventions and measurements of mental health among orphaned children in LMICs. (Shannon Dorsey 1, 2015)

Mental Health of Orphans

Studies on orphans in the recent years revealed that orphans are highly subjected to negative emotions like: depression, distress, anxiety behaviour and emotional disorders, hyperactivity, abnormal pro social behaviour, peer problem, phobias, post traumatic disorder and aggressiveness. They are at high risk in development of psychological disorders when compared to non-orphans. The studies show a prevalence of overall social emotional and behaviour problems which are grounded in the developmental years of

these children. Their experience of loss leads to attachment concerns. The lack of parental nurturance and affection has negatively impacted the mental health in their later life. Apart from degenerating mental health orphanhood also has given rise to drug related addictions and suicidal ideations among orphans. Research suggests immediate interventions are to be implemented for such vulnerable populations.(Akshita Singh, 2016).

The psychological well-being of children and adolescents has been a matter of great concern to researchers. Earlier studies report a prevalence of emotional difficulties, including depression, anxiety, and social interaction problems, as well as behavioral issues, such as hyperactivity and conduct concerns. However, the occurrence of these problems is not equal among all children and depends on several factors. Children who are orphaned, abandoned, or runaways staying in institutions are a vulnerable group, which is recognized by India's Integrated Child Protection Scheme. Several studies on the prevalence of emotional and behavioral difficulties among orphaned and vulnerable children have been conducted. The pooled prevalence of emotional and behavioral disorders was found to be 18.3–64.53%. On the other hand, prevalence rates among children and adolescents from the general community were found to be between 8.7 and 18.7%. Compared to children living with their parents, institutionalized orphans are more likely to have emotional and behavioral problems. For example, a study conducted by Rahman et al. reports that 40.35% of orphaned children and adolescents in Pakistan suffer from emotional and behavioral disorders. Another study by El Koumi et al. in Cairo found that 64.53% of institutionalized children have behavioral disturbances.

Children from orphanages, abandoned, or run away from home face a higher risk of emotional and behavioral problems due to various risk factors, including neglect, abuse, exploitation, and lack of parental care. Poverty, deprivation, and social isolation may also contribute to the emergence of emotional and behavioral difficulties. Additionally, institutional care, which does not provide enough psychological support, neglects children's social and emotional needs, negatively affecting their adjustment. A combination of these factors increases the likelihood of the appearance of emotional and behavioral problems in institutionalized children.

Studies in different parts of the world also confirm that institutionalized children and adolescents have diverse emotional and behavioral difficulties. For example, research conducted in Karachi, Pakistan, among children staying in SOS and ordinary orphanages revealed that the majority of them have problems with peers and pro-social behavior, as well as conduct and emotional concerns. Children with hyperactivity were also observed. Specifically, the study found that 84% of children had peer-related difficulties, 50% had conduct problems, 47% had challenges with prosocial behavior, 13% were hyperactive, and 9% had emotional problems.

The number of studies reporting on the psychological well-being of institutionalized children in India is limited even though the country has a large population of such vulnerable groups as street children, orphans, and runaways. However, several pieces of research conducted among institutionalized children in different parts of the country report the presence of a variety of emotional and behavioral difficulties.

For example, Shanthi and Jeryda Gnanajane Eljo's study on street children in Tiruchirappalli found that 56% of the participants had emotional and behavioral problems. Another study conducted in Mangaluru by Sujatha and Jacob found that 7.5% of institutionalized orphans were at risk of hyperactivity, while 37.5% faced the risk of peer problems, and 12.5% had severe peer-related difficulties. The researchers also found that 5% of the children had abnormal prosocial behavior, while 22.5% were at risk. Emotional and behavioral difficulties affect children's lives and the quality of their adjustment in different areas, including school performance, friendships, and adult life. Early intervention and psychological support are crucial to help such children overcome their challenges. Studies on the psychological well-being of institutionalized children in India are limited, and more research is needed to reveal the prevalence of various emotional and behavioral difficulties and the risk factors contributing to them.(Kaur, 2018)

Research Gaps and Objectives:

Orphaned children demonstrate greater levels of anxiety and depression than their non-orphaned counterparts in Uganda (Atwine et al., 2005) and residential schools in India (Pathan et al., 2024). However, there is less clarity around the type of orphan. In South Africa, double orphans report greater levels of depression and poorer psychosocial functioning compared to single orphans, who were similar to non-orphans across most domains (Sherr et al., 2014). However, within India, there was no significant relationship between the type of orphan and levels of anxiety or depression (Pathan et al., 2024). Research also shows mixed findings regarding gender. In Uganda, orphaned children demonstrate poorer psychological outcomes however only in males (Kaggwa & Hindin, 2010).

There are several limitations to the current research. Firstly, most studies focus on documenting risk factors rather than focusing on interventions. Secondly, whilst there are limited investigations looking at the impact of art-based interventions in orphaned or institutionalised children, these have been performed on a small sample size and have focussed on non well-being outcomes. One investigation looked at the impact of an expressive art making session lasting for a short period of time on levels of anxiety in orphaned girls in Iran; showing some positive results (Zarezadeh Kheibari et al., 2014). A four-week art based intervention increased life skills, self-esteem and reduced emotional and behavioural problems in 28 institutionalised boys in Pakistan (Amjad & Jami, 2020). Finally, there is not much knowledge around whether psychological wellbeing outcomes from interventions differ based on gender and orphan status.

Methods

Design

A quasi-experimental pre-test, post-test control group design was used. The independent variables were experimental/control group condition and pre-test/post-test. Additional variables considered were gender and orphan type. The dependent variable was psychological well-being.

Participants

The sample consisted of a total of 80 children (40 males and 40 females) who were orphans between the ages of 7 and 15. These children were from an orphanage in urban Bengaluru, India. They were selected through purposive sampling.. Inclusion and exclusion criteria were applied. Single orphans made up the majority group. Participants were randomly allocated to either the experimental group (n = 40) or control group (n = 40). Allocation was done through the lottery method. There were no differences in psychological well-being between the two groups at pre-test (t(78) = -0.25, p = .806).

Intervention

The experimental group participated in a 20-session, structured arts based intervention over the course of 6 weeks. Sessions were held 3 times a week for 30 minutes each. There were 40 children in the experimental group.The sessions started with an ice-breaker activity, followed by colouring mandalas, creating a self-portrait, creating a collage about things they are grateful for, positive affirmation cards, mindfulness colouring, nature based art, art journaling, modelling with clay and a goodbye activity.

Intervention Plan

Session	Theme	Time	Goals	Materials Required
1	Ice-Breaker	1 hour	To make the child comfortable and build rapport.	Chocolates and stationery (pencil and eraser)
2, 3	Group Activity (Mandala Colouring)	30 mins	To promote mindfulness and focus. To encourage self-expression. Helps build perception of social support.	Mandala sheets, art materials (colours)
4, 5	Self-Portrait	30 mins	To encourage creative expression of themselves. Serves as a visual outlet for thoughts, emotions, and perceptions.	Paper, art materials, mirrors
6, 7	Gratitude Collage	40 mins	Serves as a visual reminder of the positive aspects of life. Shifts focus from challenges to blessings; promotes well-being and achievement motivation.	Old magazines, glue, sheets
8, 9, 10	Positive Affirmation Cards	20 mins	Boosts self-esteem. Promotes positive thinking. Emphasises values such as kindness, resilience, and empathy.	Chart paper cut into cards, art materials (sketches, crayons, etc.)
11, 12, 13	Mindful Colouring	25 mins	Encourages children to stay in the 'here and now'. Promotes patience and persistence.	Colouring sheets, colours
14, 15, 16	Nature-Inspired Art	30 mins	Enhances observational skills. Nature provides a rich source of inspiration, promoting imagination and creativity.	Sheets of paper, art material, glue, natural materials (e.g., leaves)
17, 18	Artistic Journaling	30 mins	Serves as a method of artistic self-expression. Records memories and experiences, showing the child's growth.	Journals, colour mediums
19	Clay Model Making	1 hour	Supports grounding and tension release through tactile, embodied expression; offers an alternative outlet for children who find 2-D or verbal expression harder to access.	Modelling clay/play-dough, sculpting tools, work surfaces

Session	Theme	Time	Goals	Materials Required
20	Goodbye Activity-Dance Movement Session	1 hour	Facilitates appreciation and closure. Consolidates a sense of achievement and continuity beyond the module.	Had a session on Dance Movement to facilitate relaxation and expression of emotions.Collected artwork/portfolios, exhibition space, optional certificates.

Procedure

The PWB-c scale was administered on the orphaned children at pre-intervention and within 6 weeks of completing the intervention.

Data Analysis

Data was analysed using SPSS 20.0. An independent sample t-test was conducted to determine if the groups were equivalent at baseline. A 2 (group) x 2 (time) mixed ANOVA was conducted to determine the effect of the intervention. The main analysis was the interaction effect between time and group. Partial eta squared was used as the measure of effect size.

Measures:

The questionnaire to assess Psychological Well- Being was The Stirling Children's Wellbeing Scale (commonly referred to as the Stirling Scale) which measures emotional and psychological wellbeing in children and young people aged 8 to 15 years. The areas of wellbeing covered by the scale include optimism, cheerfulness and relaxation; satisfying interpersonal relationships; positive functioning including clear thinking and competence. It includes 12 self-report items answered on a 5-point scale and aims to assess wellbeing with a positive focus, rather than focusing on mental illness, in the areas of positive emotional state and positive outlook. There are an additional three items to determine if the participant's answers are biased or if they have a socially desirable response set.

Results

H_{01}: There is no significant difference in psychological well-being between orphaned children who participate in the structured art-based intervention and those in the control group.

A two-way repeated measures ANOVA was conducted to assess the effects of Time (pre-test, post-test) and Group (experimental, control) on participants' psychological well-being scores. A statistically significant main effect of Time was found, $F(1, 78) = 35.32$, $p < .001$, partial $\eta^2 = .312$. This suggests that participants' psychological well-being scores improved significantly across both groups from pre-test to post-test. Importantly, a statistically significant Time × Group interaction was also found, $F(1, 78) = 15.05$, $p < .001$, partial $\eta^2 = .162$. This indicates that the pattern of change in psychological well-being scores across time differed significantly between the two groups. As can be seen in Table 1, the mean

psychological well-being score of the experimental group increased significantly more over time than the mean score of the control group from 25.55 (SD = 6.41) to 29.00 (SD = 6.18). The main effect of Group was not statistically significant, $F(1, 78) = 0.43$, $p = .512$, partial $\eta^2 = .006$, suggesting that the two groups did not differ significantly when the scores of both time points were averaged since the scores of the control group were almost identical to the scores of the experimental group at baseline. Based on these results, the null hypothesis H_{01} is rejected: the psychological well-being scores of the orphaned children who participated in the intervention improved significantly more than those of the control group.

Table 1
Descriptive Statistics of Psychological Well-Being

Group	N	Pre-test M	Pre-test SD	Post-test M	Post-test SD
Experimental	40	25.55	6.41	29.00	6.18
Control	40	25.93	7.14	26.65	7.69

Table 2
Independent-Samples t-Test Comparing Experimental and Control Groups at Pre-Test

Variable	t	df	P	Mean Difference
Psychological Well Being	− .247	78	.806	− .375

Table 3
Repeated Measures ANOVA for Psychological Well-Being Across Groups and Time

Effect / Source	SS	df	MS	F	p	Partial η2
Time	174.31	1	174.31	35.32	< .001	.312
Time × Group	74.26	1	74.26	15.05	< .001	.162
Error (Time)	384.94	78	4.94	–	–	–
Between: Group	39.01	1	39.01	0.43	.512	.006

Discussion

The results of the current study demonstrate that the art-based activities intervention had a positive effect on children's psychological well-being. The results of the repeated-measures ANOVA revealed that there was a significant main effect of Time, $F(1, 78) = 35.32$, $p < .001$, partial $\eta\ 2 = .312$. This suggests that the changes in the level of psychological well-being from pre-test to post-test were significant for both groups. The magnitude of this effect was considered to be large since the value of partial $\eta\ 2$ was equal to .312.

Most importantly, the results also revealed a significant Time × Group interaction, $F(1, 78) = 15.05$, $p < .001$, partial $\eta 2 = .162$. This finding suggests that the differences in the level of psychological well-being between the groups from pre-test to post-test were significant. This indicates that the proposed art-based activities intervention had a positive effect on children's psychological well-being. Although the significant main effect of Time demonstrated that the level of psychological well-being changed from pre-test to post-test, the focus of this study was on determining whether these changes were greater for children who participated in the intervention than for those who did not.

The significant Time × Group interaction indicates that the art-based activities intervention led to a significant increase in the level of psychological well-being among the participants. This result is explained by the fact that art-based activities allow children to express their feelings creatively. Moreover, engaging in creative activities can make children happy because they have an opportunity to enjoy the process of creating art. The positive emotions associated with art-based activities can also help children feel more involved in the creative process, thus influencing their psychological well-being positively. The positive effect of the proposed art-based activities intervention on children's psychological well-being can also be explained by its structure. The intervention included 20 goal-oriented art-based activities designed to be completed during six weeks. During each session, the children participated in various structured activities that likely helped them stay focused and engaged. As a result, completing the proposed activities consistently throughout six weeks affected the children's psychological well-being positively.

It is also important to note that the results of the current study primarily concern children living in an orphanage. Therefore, the psychological well-being of these children can be impacted negatively by their living conditions. Since children living in an orphanage are used to communicating only with other orphans, any positive change in their social interactions can affect their psychological well-being positively. The current study's results demonstrated that art-based activities have the potential to become an effective tool for increasing the level of psychological well-being among orphans. This statement is supported by the significant increase in the psychological well-being of the experimental group.

The main effect of Group was not significant, $F(1, 78) = 0.43$, $p = .512$, partial $\eta 2 = .006$. This can be seen as evidence that no difference in psychological well-being was found between the control and the experimental groups. It is essential to consider this result in the context of the previously discussed significant Time × Group interaction, $F(1, 78) = 15.05$, $p < .001$, partial $\eta 2 = .162$. Accordingly, the significant change in psychological well-being from pre-test to post-test was found for the control group (see Fig. 1). Most importantly, the significant Time × Group interaction demonstrates that the change in psychological well-being from pre-test to post-test was different for the two groups.Indeed, the magnitude of the effect of the intervention was considerable, considering the value of partial $\eta 2 = .162$. This allows concluding that the art-based activities intervention had a positive impact on the level of psychological well-being among the participants.

Overall, the results of the current study provide evidence for the effectiveness of the proposed art-based activities intervention. The significant Time × Group interaction, $F(1, 78) = 15.05$, $p < .001$, partial $\eta 2 = .162$, indicates that the art-based activities intervention led to a significant increase in the level of psychological well-being among the participants. This conclusion is supported by the fact that no significant difference between the control and the experimental group was found at the pre-test stage.

The null hypothesis of the current study is as follows: H_0: There is no significant effect of art-based activities on the psychological well-being of orphaned children. The results of the current study reject this hypothesis.

Conclusion

In the present experimental study with the participation of 80 children in an orphanage, the art based intervention led to a significant increase of Psychological Well Being after the intervention. The study suggests further investigation into the effect of art based interventions on larger sample sizes of orphans in different institutions.

Theoretical Framework:

This study has been based on attachment theory, Ryff's psychological well-being model and expressive arts. According to attachment theory, children form an emotional and social bond with their carers who provide a secure base. The loss of one or both parents will cause lasting issues with emotional security and expression (Bowlby, 1980). Orphaned children in institutional care therefore require intentional psychosocial interventions. Psychological well-being can be defined as showing positive behaviours in areas such as self-acceptance, positive relationships, autonomy, environmental mastery, purpose in life and personal growth (Ryff, 1989). Participating in art-based activities can help to develop these resources. The Expressive Therapies Continuum highlights that creating art can be used in an affective, sensory and cognitive manner to help children express their emotions non-verbally (Kagin & Lusebrink, 1978; Malchiodi, 2012). Engaging children in positive and absorbing activities such as creating gratitude collages and affirmation cards can help to increase attention and long-term personal resources (Fredrickson, 2001). Overall, by providing a structured art-based intervention, orphaned children will have a safe, expressive and positive routine. This will lead to increased emotional expression, self-acceptance and positive relationships with peers and facilitators. In turn, they will exhibit increased psychological well-being. This hypothesis was generated that children in the experimental group will show more improvement in their well-being. As it wasn't clear how differences would occur based on gender and orphan status, this was investigated as an exploratory question.

Implications:

These findings suggest that structured art-based activities are a practical solution to improving psychological well-being in orphaned children. The short intervention (20 sessions over 6 weeks) can easily be implemented within limited resource orphanages due to the minimal cost of materials used

(e.g. colours, paper, collages and modelling). Staff from the orphanage, counsellors, social workers and teachers can be trained to deliver the manualised intervention. In this study the activities were structured from start to finish (ice-breaker, colouring mandala, self-portrait, journaling and final activity). As there were no differences found between the genders or orphans, this intervention could be delivered to both boys and girls, with single and double orphans in one group. Child care institutions and policy makers may wish to consider implementing art based activities into their routine psychological support to provide quality care. This is supported by research conducted by Amjad and Jami (2020) which showed that an art based program had benefits for institutionalized children in Pakistan.

Strengths Limitations and Future Research:

Strengths:

The design of using randomisation means that the two groups were similar at baseline on their psychological well-being scores, which therefore supports the claim that the improvements were due to the intervention. Structured intervention, meaning it can be described and replicated. Psychological well-being was measured using a standardised measure (PWB-c). There is a good balance of boys and girls within the sample, plus single and double orphans. This allowed comparison between the genders and different orphan types, something not often seen in art based studies involving orphaned children.

Limitations:

There are some limitations to consider. Firstly, the sample were all from the same orphanage in urban Bengaluru, which means findings may not be generalised too other areas such as rural institutions, community based or other regions. Secondly, the sample size was small (N = 80), and therefore when split into males and females, plus single and double orphans there were quite small subgroups. This means the non-significant differences should be viewed with caution as there may not have been enough power. Thirdly, psychological well-being was self reported which could be influenced by social desirability bias especially with younger children. Fourthly, there was no follow up to see if the improvements are sustained after the 6 week programme. Lastly, participants in the control group continued with their general daily routine indicating that part of the difference could be due to receiving more time and attention compared to the experimental group.

Future Research:

Future research should look to replicate the programme in multiple orphanages and across regions including rural and community based. A larger sample would allow enough power to compare subgroups. Follow up measures after 3–6 months would allow us to see if the improvements are sustained. An active control group would help to determine whether improvements were due to art activities or the attention given in the group. Future studies could include other measures such as caregiver/teacher reports. Mixed methods could be used to get children's perspectives of the sessions. Also future research could look to determine which aspects of the module led to the changes, such as expressive activities vs mindful activities.

Financial support and sponsorship

No financial support or sponsorship was used for this research.

Declarations

This study was approved by the Doctoral Research Committee of CMR University in December 2022 , which reviewed the research proposal, including its ethical aspects. Permission was obtained from the University to collect data from the orphanages. Additionally permission was obtained from the orphanage authorities, and informed consent was obtained from the institutional guardians, with assent from the children. The study was conducted in accordance with the ethical principles of the APA Ethical guidelines.

Conflicts of interest

There are no conflicts of interest

Ethics Approval :

Informed Consent was obtained from institution and all participants included in the study

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11. Result, Tables

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- ResultTables.odt